Jackson Street Shops,
Power House
Jackson Street, Pennsylvania Avenue
St. Paul
Ramsey County
Minnesota

HABS No. MN-67-J

HABS
MINN,
62-SAIPA,
17-J-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey
National Park Service
Rocky Mountain Regional Office
Department of the Interior
P.O. Box 25287
Denver, Colorado 80225

HABS
MINN,
62-SAIPA,
17-J-

HISTORIC AMERICAN BUILDINGS SURVEY

JACKSON STREET SHOPS HISTORIC DISTRICT,
POWER HOUSE

HABS No. MN-67-J

Location: Jackson Street and Pennsylvania Avenue
St. Paul, Ramsey County, Minnesota

USGS St. Paul East Quadrangle, Universal Transverse Mercator Coordinates: Zone 15; 491920.4878640; 492560.4878640; 492560.4878540; 492300.4878540; 492140.4878400; 491920.4878400

Present Owner: Burlington Northern Railroad Company
176 East Fifth Street
Saint Paul, Minnesota 55164

Present Use: Abandoned

Significance: The Power House is considered a non-contributing building in the Jackson Street Shops complex. It is a non-descript red brick and glass block structure typical of 1940's industrial architecture. The Power House was built to replace the older, coal-fired steam plants in the shops west of Jackson Street.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of erection: Circa 1944. Original plans dated February 1942, but revisions would indicate building erected in 1944.

2. Architect: Thomas D. McMahon

3. Original and subsequent owners: Great Northern Railway Company built the building. Presently owned by Burlington Northern Railroad Company.

4. Original plans: Original drawings prepared for Great Northern Railway, St. Paul, Minnesota. Plans titled "Power House at Jackson Street", dated February 1942, drawing numbers 9131-1 through 9131-10 are in possession of Burlington Northern Railroad Company, 176 East Fifth Street, St. Paul, Minnesota 55164.

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural character: A one story brick building with a full basement. It has a flat composition roof with a 12" parapet around it. The building consists of two sections; the boiler room and the compressor room. The building is considered non-contributing and is of undistinguished design.

2. Condition of fabric: The exterior of the building is in good condition. Some of the glass block windows have been broken out. The other windows are either boarded up or broken.

B. Description of Exterior:

1. Overall dimensions: 84'-8" X 55'-10"

a. Boiler room: 51'-2" X 55'-10"

b. Compressor room: 33'-6" X 32'-10"

2. Foundations:

a. Boiler room: The construction consists of 3'-3" X 18" poured concrete footings, reinforced with three 1/2" Ø bars. The foundation walls are of concrete, 23" wide and 10'-3" high above the basement floor.

b. Compressor room: The footings are 27" X 12", with 1/2" Ø reinforcement bars. The foundation walls are 19" thick with 1/2" Ø bar reinforcements at 24" on center. Located within the basement are two compressor foundations with the overall dimensions of 18'-2" X 9'-8", and 9'-0" X 9'-9".

3. Walls: The exterior walls are of red face brick with cast stone trim.

a. Boiler room: The exterior brick wall rises to a height of 34'. A 12" band of cast stone trim follows; above that 4'-6" of face brick, topped off by the 5" cast stone coping.

1. On the north and west sides, in the 4'-6" band of face brick is a sign with the letters "GREAT NORTHERN RY."

b. Compressor room: The exterior brick wall rises to a height of 17'-0" followed by a 12" band of cast stone trim, topped off with a 5" cast stone coping.

4. Pilasters:

a. Boiler room: Each wall of the boiler room is divided into three bays by two 3'-10" pilasters. Each pilaster is topped off by a cast stone cap.

b. Compressor room: Each exterior wall of the compressor room is divided into three bays by two 21" pilasters. These pilasters are also topped off with cast stone caps.

5. Openings:

a. Doorways and doors:

1. The west wall of the boiler room has three doors. One single door below grade that leada into the basement. On the main floor there are two sets of double doors. Each door is 4'-0" X 7'-0". These are constructed of hollow core steel, with nine 10" X 20" wire glass panea.

2. The east wall of the compressor room has one, centered, double door; 4'-0" X 7'0". These doors are also hollow core steel with nine 10" X 20" wire glass panes.

b. Windows: All windows are six pane, 12" X 18" glass size unless otherwise noted. All glass blocks are #351 except on the north side, which are #354.

1. On the main floor of the boiler room there are 18 awning type windows.

a. On the north wall there are six of these awning type windows, grouped in pairs, centered in each bay. Above each window are glass block windows, five blocks wide by thirty blocks high.

b. On the west wall are two awning type windows centered in the center bay. Above these windows and above the doors are glass block windows, five blocks wide and thirty blocks high.

c. On the south wall there are six awning type windows, all grouped in pairs. The two outer bays have glass block windows above which are five blocks wide by nine blocks high. The center bay has glass block windows above the awning windows. These are five blocks wide by thirty blocks high. Centered above is an awning window.

d. On the east wall in the southeastern outer bay there are two awning windows, with glass block windows above; these are five blocks wide by thirty blocks high. Above this is a centered awning window. The remaining two bays have two glass block windows each. These are both five blocks wide by nine blocks high.

2. On the main floor of the compressor room there are eight awning windows.

a. On the north wall there are three awning windows, one per bay. Above each window is a glass block window that is five blocks wide by nine blocks high.

b. On the south wall there are three awning windows, one per bay. Above each window is a glass block window that is five blocks wide by nine blocks high.

c. On the east wall there are two awning windows, one centered in each outside bay. Above each of these windows are glass block windows, five blocks wide by nine blocks high.

3. In the basement of the boiler room there are five awning type windows.

a. Along the north wall there are two windows which have six 14" X 20" glass panes. The other window, which is also of awning type, is made up of ten 14" X 20" glass panes, six of which are operating sash; the size of this window is 6'-0" wide by 3'-5" wide. All three of these windows are above grade.

b. In the southeast corner of the basement along the east wall are two awning windows, both below grade. Outside of these windows is a concrete area way. Each area way has one six paned awning window within it with the glass size of 10" X 20".

6. Roof: The roof over both the boiler room and the compressor room is a flat composition roof, constructed of 3" X 12" X 30" solid reinforced gypsum roof tile; and five-ply pitch and gravel roofing.

a. The ceiling of the boiler room is 33'-6" above the floor. It is constructed of ceiling trusses of steel, which span from the east wall to the west wall. These trusses are supported at the ends by 3/8" X 9" I-beams which are in the wall. On top of these trusses are 10" X 4" steel joists, 30-3/8" on center. These have 5/8" Ø bridging between. On top of the steel joists is the roof construction mentioned above.

b. The ceiling is sloped from the west to the east in the compressor room. The ceiling height ranges from 16'-6" to 16'-0". The roof is supported by two 18" X 7-1/2" beams spanning from the north wall to the south wall. On top are 6" X 4" steel joists 30-3/8" on center, running east to west. The roofing is the same as over the boiler room. A 24" ventilator with damper is centered on the roof.

C. Description of Interior:

1. Floor plans:

a. Basement: Under the boiler room there is a full basement, the height of which from floor to floor is 10'-3". The floor is of concrete slab construction, 6" thick with 3/8" Ø reinforcement bars 18" on center both ways. The basement of the compressor room has a floor to ceiling height of 6'-3-1/2". The floor is of concrete slab construction, reinforced with 3/8" Ø bars 18" on center both ways. Located in the basement are two compressor foundations with the overall dimensions of 18'-2" X 9'-8", and 9'-0" X 9'-9". There is a 3'-0" X 5'0" opening which leads from the boiler room basement to the compressor room basement.

b. Main floor: In the boiler room there are two boilers. They are constructed of concrete, faced inside with 4-1/2" firebrick. The walls are 2'-4" thick and they are 9'-5" wide by 13'8" long (inside measurements). On the north end of the boilers there is a duct opening 7'-0" wide. The centers of the boilers are 12'-11-1/2" on each side of the center of the boiler room. The interior height of the boiler room is 33'-6", floor to ceiling truss height. In the compressor room there are two compressor foundations which are the same dimensions as mentioned in the basement description. Along the west wall in the northwest corner is a water closet, drinking fountain, lavstory and slop sink.

2. Stairways: There is an interior stairway in the boiler room along the north wall. This leads down to the basement of the boiler room. Also, there is an exterior stairway along the west wall that also leads down to the basement of the boiler room. Both of these stairways have 1-1/2" pipe railing around them. Also on the south end of the boilers there is a metal stairway leading up to a cat walk between the boilers.

3. Flooring:

   a. Boiler room: The floor in the boiler room is of concrete slab construction, except in the space between the boilers. This area of the floor is constructed of metal grating.

   b. Compressor room: The flooring of the compressor room is also of concrete slab construction, except in the area between the compressors. There is a metal grating, measuring 6'-8" X 3'-5" which opens into the basement.

4. Walls and ceiling finish: The walls in the power house are brick and are now painted. The ceiling has the trusses exposed and is not finished.

5. Doors: On the main floor there is a 3'-0" X 7'-0" metal clad door separating the boiler room and the compressor room.

6. Mechanical equipment: Between the two boilers on the north end is a metal box for some gauge equipment. Also on the west wall by the northwest door, there is a pressure gauge.

D. Site:

The power house is located just east of the engine house and just south of the existing railroad tracks. There are now out buildings located with the power house.

PART III. SOURCES OF INFORMATION

A. Primary and unpublished sources:

Original drawings dated February 1942 in the files of Burlington Northern Railroad Company, 176 East Fifth Street, St. Paul, Minnesota 55164.

B. Secondary and published sources:

Sanborn Insurance Maps 1956

Prepared by:
Karen Peterjohn
University of Minnesota
March, 1985

PART IV. PROJECT INFORMATION

This project was prepared as a class project for Architecture 5142 Historic Building Research and Documentation, a class offered in the School of Architecture and Landscape Architecture at the University of Minnesota, Minneapolis, Minnesota. The class project was prepared under the direction of Professor Foster W. Dunwiddie and was funded by a grant from the State Historic Preservation Office of the Minnesota Historical Society Saint Paul, Minnesota. Historical data compiled and measured drawings prepared by Karen Peterjohn.